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Study to examine challenges in the African region to protecting traditional knowledge, genetic resources and folklore

Note by the secretariat

Pursuant to the decision of the Permanent Forum on Indigenous Issues at its eleventh session (see E/2012/43, para. 48), Paul Kanyinke Sena, a member of the Forum, undertook a study to examine challenges in the African region to protecting traditional knowledge, genetic resources and folklore. The outcome of the study is hereby submitted to the Permanent Forum at its thirteenth session.

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Study to examine challenges in the African region to protecting traditional knowledge, genetic resources and folklore[1]

I. Introduction

1. Following the introduction, the present study proceeds in four sections. Section II provides a brief overview of the concepts of traditional knowledge, genetic resources and folklore (referred to as indigenous knowledge) and provides a snapshot of some of the main challenges that face indigenous communities with regard to preserving, protecting and promoting their indigenous knowledge. Section III offers an overview of the relevant normative frameworks for protecting indigenous knowledge, and highlights some of the ongoing international, African regional and national processes for securing and strengthening indigenous peoples' rights to indigenous knowledge, as well as the utilization of indigenous knowledge and the flow of benefit to the knowledge holders. Section IV outlines some of the major challenges in the African region for protecting indigenous knowledge, contextualizes the challenges to existing legal frameworks and highlights examples of good practices. Section V offers recommendations to entities of the United Nations system, regional bodies, Member States and indigenous peoples on the basis of the gaps identified.

II. Overview of concepts

2. The present study does not attempt to define traditional knowledge and the interrelated notions of genetic resources and folklore, but offers general comments on the concepts guided by the understanding of indigenous peoples in the African region,[2] who have stressed that indigenous knowledge, genetic resources and traditional cultural expressions all form part of a single integrated heritage and should not be divided into different compartments. The World Intellectual Property Organization (WIPO) has acknowledged that, from indigenous peoples' standpoint, traditional knowledge, genetic resources and traditional cultural expressions raise different issues and may therefore require different sets of solutions.[3] With this in mind, the study applies the term "indigenous knowledge" to describe the entire field of traditional knowledge, traditional knowledge associated with genetic resources, and traditional cultural expressions of indigenous peoples and their communities.

3. Indigenous knowledge is embedded in the cultural traditions and long-standing practices of indigenous communities. It is a living, cumulative body of knowledge, practices, traditions and cultural expressions that have been developed and maintained by indigenous peoples in their interactions with their environments.

[1] The author would like to acknowledge the contribution of Toe Holmström, the team in Africa and the Traditional Knowledge Division of the World Intellectual Property Organization (WIPO) for the support extended to this study. The views expressed in this study are those of the author.

[2] Possible criteria for identifying indigenous peoples in the African region are contained in chapter IV of the report of the Working Group on Indigenous Populations/Communities in Africa, adopted by the African Commission on Human and Peoples' Rights in its resolution ACHPR/Res.65 (XXXIV).

[3] WIPO, Background Brief No. 1, Traditional knowledge and intellectual property.

Holistic in nature, indigenous knowledge is closely linked with the communities' relationship to their lands, their territories and the natural resources. Indigenous knowledge forms a sophisticated set of understandings, interpretations and meanings. It comprises language, naming, classification systems, resource-use practices, customs and belief systems.[4] The concept of indigenous knowledge embraces different meanings for the diversity of indigenous peoples who depend on it for their livelihoods and well-being. Indigenous knowledge involves a living body of knowledge that is sustained, developed, and passed on from generation to generation. The living nature of the components of indigenous knowledge, as employed in this study, therefore makes it difficult to define.[3]

4. A fundamental aspect of indigenous knowledge is that it embodies an indigenous community's collective identity and ways of surviving in and relating to the environment. It is dynamic and evolves to adapt to the changing circumstances and needs of indigenous communities. In short, it represents strategies for indigenous communities to deal with their environments in a wide range of fields, including food and agricultural production, education, trade and economic development. In the field of health, traditional medicinal knowledge is of great social, cultural and scientific importance to indigenous peoples. Indigenous knowledge has a considerable gender dimension that is alive but not often discussed. Indigenous women play a crucial role in the generation, conservation and sustainable use of biological diversity and associated indigenous knowledge, culture and technologies. Providing indigenous women with support to be able to fully participate in and influence all levels of decision-making on the well-being of the community is therefore of crucial importance.

5. The links between indigenous knowledge and customary law are central. Customary laws serve to regulate and control the manner in which the knowledge is communicated, shared, used and applied. In light of the important role of customary law and customary knowledge protection systems, indigenous peoples express concern about the survival of their social institutions and practices in which their knowledge is based, maintained and transmitted. Indigenous peoples have stressed that indigenous knowledge can only survive and thrive when they and their customary laws and practices are fully respected and supported. Indigenous knowledge has accumulated over centuries through empirical observations and interactions with the environment. Indigenous knowledge has been passed on from generation to generation through shared practices and oral storytelling. The fact that there is a lack of written records may have the effect of putting indigenous knowledge at serious risk of extinction.

6. Contrary to intellectual property rights, as recognized by the current intellectual property rights system, indigenous knowledge is largely perceived as belonging to the community rather than to individual members of the community. Being collectively owned, it is not easily protected by the current intellectual property system, which grants protection for a limited period to inventions and original works by named individuals or companies.[3] The lack of legal protection for indigenous knowledge is a significant underlying reason for the current destruction and rapid loss of this knowledge. To effectively protect indigenous knowledge,

[4] J. M. Wekundah, *Why Protect Traditional Knowledge?*, African Technology Policy Studies Network, Special Paper Series No. 44 (Nairobi, African Technology Policy Studies Network, 2012).

effective policy and legal measures should be adopted at the international, regional and national levels, with the full and equal participation of indigenous peoples in drafting and approving those measures.

7. Africa is a continent rich in biodiversity and is home to roughly 50 million persons who identify themselves as indigenous peoples. Their livelihoods and well-being are dependent on their knowledge about the environment and ecosystems in which they find themselves and the genetic resources therein. As in other parts of the world, indigenous knowledge has been developed and maintained as a matter of survival for communities and reflects the particular relationship of indigenous peoples with their environments. However, Africa, especially sub-Saharan Africa, remains the region where more than 218 million people live in extreme poverty. The capacity of rural people to make a livelihood has been dramatically curtailed by warfare, and per capita food production has plummeted. Land degradation, a consequence of extensive agriculture, deforestation and overgrazing, has reached alarming levels and further threatens livelihoods. The poorest people live in isolated zones, deprived of the social safety nets and poverty reduction programmes available in semi-urban and urban areas.[5] This is ironic given the richness of indigenous knowledge and the abundance of natural resources within Africa that could be used to lift the continent out of poverty. Indigenous knowledge, technologies, know-how and practices can help to alleviate poverty. Some of the best practices include the cultivation of drought-resistant and early-maturing crop varieties and traditional techniques of food preservation and storage.[6] Indigenous knowledge systems can play a pivotal role in economic sustainability, self-reliance and cost-effectiveness. Further, indigenous knowledge in sub-Saharan Africa holds particular viability and strength,[7] especially in terms of food security and health care.

8. Indigenous knowledge should therefore be protected, preserved and promoted. Any development policies or programmes that target or that may affect indigenous communities need to fully recognize the important role that indigenous knowledge plays for the survival of the communities and its potential role in the economy as a whole. It is important to underline that the concerns about indigenous knowledge in Africa, as much as elsewhere, are framed and informed by the bigger issues at stake, such as the position of indigenous communities within the wider economy and society of the country in which they reside and their access to or ownership of land that they have traditionally inhabited, used or otherwise occupied. Concerns about the preservation of indigenous knowledge, and the continued way of life of the communities that hold such knowledge, are often symptomatic of the underlying problems that these communities face due to external pressures.[8] In this regard, multiple measures will be required to effectively protect, preserve and promote indigenous knowledge.

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[5] International Fund for Agricultural Development, Rural Poverty Portal.

[6] United Nations Environment Programme, Indigenous Knowledge in Disaster Management in Africa (Nairobi, 2008).

[7] Emmanuel K. A. Sackey and Ossy M. J. Kasilo, "Intellectual property approaches to the protection of traditional knowledge in Africa", *African Health Monitor*, No. 13 (August 2010).

[8] Commission on Intellectual Property Rights, Integrating Intellectual Property Rights and Development Policy (London, 2002).

III. Relevant normative frameworks and current international initiatives to protect indigenous knowledge

9. For indigenous peoples, the rationale for protecting indigenous knowledge revolves around several intertwined issues, including the question of their fundamental rights; their ability to protect and control access; the use of their own knowledge and cultural heritage[4] while ensuring the flow of any benefits for the utilization of indigenous knowledge; and whether indigenous peoples are able to use indigenous knowledge as a basis for their own forms of development (see E/C.19/2010/14, para. 28). All this requires proactive, enforceable legal instruments and policies at the international, regional and national levels. Some international processes and initiatives have started to respond to the disputes associated with the misappropriation and unauthorized use of indigenous knowledge. The relevant normative frameworks, as well as ongoing international processes for the various aspects of indigenous knowledge are briefly outlined below.

A. Relevant normative frameworks

10. The present study has proceeded with the understanding that indigenous knowledge embraces all the related concepts of genetic resources, traditional knowledge and traditional cultural expressions. At the same time, however, identifying a normative framework for the umbrella term "indigenous knowledge" requires reference to the specific international instruments that deal with all the component parts of indigenous knowledge.

11. The Convention on Biological Diversity has been the pioneer for addressing the issue of recognition, preservation and commercial exploitation of indigenous knowledge. Article 8 (j) of the Convention, the most authoritative provision dealing with traditional knowledge, provides that each Contracting Party shall, as far as possible and as appropriate:

> Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices.

It should be noted, however, that article 8 (j) has limitations in that it does not discuss the protection of knowledge but calls upon Contracting Parties to respect, preserve and maintain traditional knowledge "subject to national legislation". As such, the article does not guarantee indigenous peoples any rights over their traditional knowledge.[9]

[9] See J. Mugabe, P. Kameri-Mbote and D. Mutta, Traditional Knowledge, Genetic Resources and Intellectual Property Protection: Towards a New International Regime, International Environmental Law Research Centre Working Paper 2001 — 5 (Geneva, 2001).

12. Article 7 of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity (Nagoya Protocol), is also central to indigenous peoples' traditional knowledge. More importantly, it underlines the need for prior informed consent of indigenous and local communities, thereby using language that is consistent with the language of the United Nations Declaration on the Rights of Indigenous Peoples. Article 7 of the Nagoya Protocol states:

> In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.

13. Building on the framework of article 15 of the Convention on Biological Diversity, especially with respect to access to genetic resources, article 6 of the Nagoya Protocol requires each party, in accordance with domestic laws, to take measures, as appropriate, with the aim of ensuring that the prior informed consent or approval and involvement of indigenous and local communities are obtained for access to genetic resources where they (indigenous and local communities) have the established right to grant access to such resources.

14. In relation to the Convention on Biological Diversity, the Akwé: Kon voluntary guidelines for the conduct of cultural, environmental and social impact assessments regarding development proposed to take place on, or which are likely to impact on, sacred sites and on lands and waters traditionally occupied or used by indigenous and local communities also provide direction. The guidelines recognize the long-term negative impacts of many developments proposed to take place on, or impact, sacred sites or lands and waterways of indigenous peoples and the consequent loss of the traditional knowledge, innovations and practices of the affected indigenous communities. They set an important framework within which Governments, indigenous peoples and local communities, as well as others involved in proposed developments should take into account the traditional knowledge, innovations and practices of indigenous communities as part of the impact-assessment processes, and be mindful of the ownership of and the need for safeguarding traditional knowledge, innovations and practices.

15. Further guidance is provided in article 31 of the United Nations Declaration on the Rights of Indigenous Peoples, the most comprehensive recognition of indigenous peoples' collective rights and a reflection of the minimum human rights standards necessary for the promotion and protection of indigenous peoples. Article 31 establishes that:

> 1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of flora and fauna, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

> 2. In conjunction with Indigenous Peoples, States shall take effective measures to recognize and protect the exercise of these rights.

16. Article 11 of the United Nations Declaration on the Rights of Indigenous Peoples is also relevant:

> 1. Indigenous peoples have the right to practise and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.
>
> 2. States shall provide redress through effective mechanisms, which may include restitution, developed in conjunction with indigenous peoples, with respect to their cultural, intellectual, religious and spiritual property taken without their free, prior and informed consent or in violation of their laws, traditions and customs.

17. Further to the United Nations Declaration on the Rights of Indigenous Peoples and the Convention on Biological Diversity, the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005) of the United Nations Educational, Scientific and Cultural Organization also provides for measures to protect and promote the diversity of cultural expressions, particularly in articles 7 and 8.

B. Ongoing international processes

18. In response to concerns over the large-scale unauthorized use and misappropriation of indigenous knowledge, including demands for equivalent protection of traditional knowledge systems, among others, States members of WIPO established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (hereafter "Intergovernmental Committee") in October 2000.[10] In 2009, the WIPO General Assembly mandated the Intergovernmental Committee to undertake text-based negotiations with the objective of reaching agreement on a text (or texts) of an international legal instrument (or instruments) that would ensure the effective protection of genetic resources, traditional knowledge and traditional cultural expressions. This instrument is expected to give indigenous peoples effective protection over their knowledge. Recognizing indigenous knowledge as intellectual property would be a historic shift in international law and would enable indigenous and local communities, as well as Governments, to protect traditional remedies and cultural expressions against misappropriation and enable communities to control and collectively benefit from any commercial exploitation of their indigenous knowledge.[3] African indigenous communities have a wealth of knowledge and should participate fully in this process, as well as in other related WIPO processes.[11]

[10] See WIPO document WO/GA/26/6, 25 August 2000.

[11] WIPO has continued to progress in its normative and policy work through its standing committees, for example, the Standing Committee on Copyright and Related Rights, the Standing Committee on the Law of Patents and the Standing Committee on the Law of Trademarks, Industrial Designs and Geographical Indications.

19. The need for the full and equal participation of indigenous peoples in the Intergovernmental Committee process has been stressed by the Permanent Forum on Indigenous Issues, most recently during its half-day dialogue with WIPO at the eleventh session of the Permanent Forum in 2012. WIPO should increase its efforts to bring African indigenous representatives into the WIPO meetings, as an affirmative action towards the continent. In this regard, the WIPO Voluntary Fund for Accredited Indigenous and Local Communities, which supports the participation of indigenous peoples' representatives in the meetings of the Intergovernmental Committee, has been crucial and should continue to be supported by WIPO member States.

20. WIPO should adopt modalities that strengthen the full and effective participation of indigenous peoples in the Intergovernmental Committee process, as well as in all other processes regarding legally binding instruments that may affect indigenous peoples' knowledge and intellectual property rights.[9] In relation to the WIPO Intergovernmental Committee process, ensuring the effective participation of indigenous peoples, including indigenous peoples from the African region, in informal consultation and expert working groups, as well as facilitators selected for sessions of the Intergovernmental Committee, is crucial.

21. The Intergovernmental Committee carries out important work, yet the apparent unwillingness of some countries to work towards the adoption of the final outcome document (or documents) hampers real progress. The Intergovernmental Committee, with the full and effective participation of indigenous peoples, should work towards the adoption of an outcome document (or documents) that reflects the core demands of indigenous peoples and that is consistent with the United Nations Declaration on the Rights of Indigenous Peoples. While some progress has been made in the process of drafting new instruments to protect indigenous peoples' knowledge, further progress is a matter of securing indigenous peoples' basic human rights.

IV. Protecting indigenous knowledge in Africa: considering challenges and approaches in the African region

A. Challenges for protecting indigenous knowledge

22. There is a serious lack of awareness of the economic value of indigenous knowledge across Africa, despite various laws and policies and the active use of traditional knowledge in rural areas. There has been very little discussion on the interlinkages between indigenous knowledge and economic development; therefore, very little effort is made by States towards protecting or investing in its development. In many instances, this is actively discouraged and the knowledge is branded "primitive", because it has not been scientifically tested or peer reviewed. Consequently, it is not featured in the education system of most countries. Until recently, the use of traditional medicine was actively discouraged in many African countries as it was deemed to be "unsafe and primitive". Yet for lack of modern medicine, traditional medicine has been relied upon for the primary health-care

needs of over 60 per cent of the population of rural Africa.[12] It is only in the tourism and, now, fashion sectors that culture is recognized and actively encouraged.

23. The impetus towards change is a major challenge in the protection and use of indigenous knowledge in Africa. The education system, organized religion and the media are extremely strong forces in the push for societal change. Indigenous peoples are constantly being reminded that if they don't discard their traditional ways, they will continue to lag behind in the area of development. Strong connections to indigenous knowledge are therefore diminishing and disintegrating as the population ages. It is noteworthy that educated indigenous peoples are at the forefront in driving the message of a need for change.

24. Weak laws and policies and, in some cases, their absence make it difficult to protect indigenous knowledge in Africa. Eighteen countries are members of the Africa Regional Intellectual Property Organization.[13] Most of these countries have some form of law for the protection of indigenous knowledge or are at various stages of developing one. However, because this matter is not a priority, government departments dealing with indigenous knowledge receive the least financing and staff. Enforcement agencies, where established, lack any form of effective enforcement capability. There is also a serious lack of awareness of opportunities for protection even within existing intellectual property laws.

25. The shared and wide use of indigenous knowledge among numerous communities presents the hardest challenge in terms of ownership, protection and utilization. Indigenous knowledge is most often shared among and between communities and their neighbours, distributed across jurisdictions, and is transboundary in nature. Traditional knowledge also develops and evolves simultaneously and in parallel in various indigenous contexts as a result of shared biodiversity and ecosystems that imply similar responses and adaptation methods.[14]

B. Misappropriation of indigenous knowledge in Africa

26. Misappropriation of indigenous knowledge in Africa is a direct consequence of the challenges described above. For the purposes of this study, misappropriation entails the wrongful or dishonest use of indigenous peoples' knowledge without their free and prior informed consent. While indigenous knowledge holders are not aware of the full value of their knowledge within the economy, the pharmaceutical and health industries, among others, are increasingly taking a greater interest in natural products for the development of new drugs and medicines. This has fuelled a growing interest in accessing indigenous peoples' knowledge about the benefits of the natural products they traditionally use. Inventions based on genetic resources found on indigenous peoples' lands are patented and developed by researchers and companies that make significant amounts of money out of these resources, often

[12] WHO, "Promoting the role of traditional medicine in health systems: a strategy for the African region", document AFR/RC50/9, para. 9.

[13] Botswana, the Gambia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sierra Leone, Liberia, Rwanda, Somalia, the Sudan, Swaziland, Uganda, the Tanzania, Zambia and Zimbabwe. See www.aripo.org.

[14] Manuel Ruiz Muller discussed this issue at an event entitled "Shared traditional knowledge: issues and options", presented at the International Centre for Trade and Sustainable Development in Geneva, 16 July 2013.

without any acknowledgment, recognition or compensation flowing back to indigenous communities. Likewise, indigenous peoples' images and traditional cultural expressions are appropriated and used as brands for product lines in a wide range of industries, including the fashion, tourism and automotive industries.

27. An illustrative example is the market for herbal products. Many of the available products are based on indigenous knowledge. The market for herbal medicine is growing rapidly, with a value currently estimated at $60 billion and expected to reach $5 trillion by the year 2050.[15] Third-party entities continue to patent mixtures that build on indigenous peoples' traditional medicines, without the free, prior and informed consent of, or fair compensation to, the indigenous communities that have improved the value of these plants and genetic resources through careful and continuous accumulation, selection, multiplication and trading of the best-adapted varieties.

28. Large-scale appropriation of indigenous peoples' traditional crafts and cultural productions is also of concern. When indigenous peoples' traditional cultural productions enter the national or international markets, little or no credit is given to the indigenous communities that have maintained these traditions. This lack of acknowledgement means that there is little reverse flow in terms of recognition, attribution or economic reward. Local artists become featureless, and indistinguishable, even sometimes within their own or neighbouring communities. This disrupts hierarchies of authority and the sense of pride that communities have because of their distinctiveness from others.[16]

29. Significant concerns have also been raised over counterfeiting, occurring when indigenous peoples' handicrafts, based upon indigenous knowledge and associated practices, are reproduced by third parties in factories and sold at reduced prices. Indigenous peoples regard this as unfair competition and as discriminatory against traditional methods, materials and techniques. Counterfeiting indigenous crafts and selling them at reduced prices can devastate the economies of indigenous communities, thereby further marginalizing them.

30. Biopiracy of indigenous knowledge, which includes the appropriation of the knowledge, genetic resources and farming practices used by indigenous communities, is also taking place. With ever-increasing frequency, individuals or institutions are seeking monopoly control over resources and knowledge in the African continent.

31. In 2010, the Endorois people in Kenya won a legal claim at the African Commission on Human and Peoples' Rights against the Government of Kenya[17] and are now waiting for the implementation of the Commission's decision. The Endorois people is one of the many indigenous groups that have experienced biopiracy.

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[15] See S. Alikhan, Socio-economic Benefits of Intellectual Property Protection in Developing Countries (Geneva, WIPO, 2000) and Zulfeequar Alam, *Herbal Medicines* (New Delhi, APH Publishing, 2008).

[16] Mar ; Anderson, "Developments in intellectual property and traditional knowledge protection", in Ulia Popova-Gosart, ed., *Traditional Knowledge and Indigenous Peoples* (Geneva, L'auravetl'an Information and Education Network of Indigenous Peoples and WIPO, 2009).

[17] *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v. Kenya*, communication No. 276/2003, ruling published 4 February 2010.

Genetic resources in the form of microbes were taken from Lake Bogoria by researchers from the University of Leicester, in the United Kingdom of Great Britain and Northern Ireland. The genetic resources were later patented by a company, which cloned the microbes developed from the enzymes on an industrial scale for textile companies and detergent manufacturers. No information or economic revenue was given to the Endorois people at any stage of the process. Estimates put the total value of the resource (now popularly used to bleach jeans) at $600 million per year,[4] money that has not benefited the Endorois, who continue to rank as one of the poorest communities in the country. The African indigenous peoples, such as the Endorois, have had very little control over how their knowledge has been documented, stored or accessed by those who have collected it, and are generally not informed about the findings of the research.[18] It is imperative that States inform indigenous communities of any current and proposed research or bioprospecting activities on their lands, and ensure that these activities are carried out in accordance with international standards on the rights of indigenous peoples.

32. The image of a Masai warrior or a Masai woman adorned with beads remains a powerful image of Africa. Dozens of companies have used and continue to use the Masai image or name to sell products. Roughly 80 companies around the world are currently using either the Masai image or name, including a fashion house that stocks Masai beach towels, hats, scarves and duffle bags.[19] A number of companies have been granted trademarks for the use of the Masai name or images, yet the Masai have not been consulted, nor have they received any compensation for the unauthorized use of their name, images and cultural expressions. The Masai have expressed concern; of particular concern is portrayal of their bodies and images where their jewellery has been used inappropriately. The unauthorized use of indigenous traditional cultural expressions, such as jewellery and chequered fabrics in the case of the Masai, is a commodification of their cultures and of objects that are regarded as sacred or infused with a special meaning by the indigenous community.

33. African indigenous communities' loss of land, as well as restrictions on access to their lands and resources has made it increasingly difficult for them to practise and maintain their indigenous knowledge systems. Though this does not represent an intellectual property issue, it has had far-reaching implications for passing on indigenous knowledge to future generations. In Cameroon, the Baka youth are losing the ability to recognize forest animals or the plants they need for an independent life in the forest. They have significantly reduced geographic knowledge of traditional Baka territories. The Bagyeli youth no longer know how to make snares from vines, nor are they able to recognize the community's traditional hunting territories. The Batwa people in Rwanda and Burundi have been denied access to their forests and have had to develop alternative livelihoods around wage labour, pottery and begging. Consequently, the Batwa people are losing the knowledge of their communities.[18] Living a subsistence life, as well as the ability to transmit knowledge to future generations, is threatened as African indigenous

[18] D. Jackson, Implementation of International Commitments on Traditional Forest-related Knowledge: Indigenous Peoples' Experiences in Central Africa (Forest Peoples Programme, October 2004).

[19] C. Hebblethwaite, "Brand Maasai: why nomads might trademark their name", BBC News Magazine, 27 May 2013.

peoples such as the Baka, the Bagyeli and the Batwa lose access to their traditional lands, thereby implicating their rights to life, health and culture.

34. It has been noted that indigenous peoples across the continent are recognized merely as suppliers of information and at times for initiatives that ultimately dispossess them of their resources and rights. Protected area planners, for instance, rely on indigenous interlocutors when they are assessing potential areas for biodiversity conservation. In the Central African region, a survey of 200 African ethnobotanists indicated that almost half of the ongoing ethnobotanical research was being conducted in areas that were likely to be occupied by indigenous peoples. In many cases, the biodiversity revealed by indigenous peoples became the reason for excluding them from their resources.[18] When evicted or forcibly relocated from their lands and resources, indigenous peoples' very existence as peoples is seriously threatened.

35. Part of the problem that indigenous peoples face in protecting their knowledge is the lack of capacity within their communities, often because of a limited understanding of what might be gained from the use of their knowledge or the consequences if their knowledge were misused and misappropriated. Any legal and/or policy initiatives to protect or benefit the holders of indigenous knowledge need to be tailored to the specific needs and resource constraints of the communities, and include capacity-building programmes, documentation initiatives and broader infrastructural developments, with the full and effective participation of the indigenous peoples. There is also a great need for measures to raise awareness among indigenous communities regarding the potential value of their knowledge, and to develop strategies for indigenous knowledge-based entrepreneurship within indigenous communities. Such entrepreneurship could serve as an important means to fight the disproportionately high rates of poverty that indigenous peoples in Africa suffer, and to protect, preserve and promote cultural practices of indigenous communities.

36. WIPO is encouraged to develop model courses for such capacity-building, including training communities in negotiation processes, elements of free, prior and informed consent processes, benefit-sharing models and dispute resolution. An online course on traditional knowledge as part of the WIPO Academy programme could be developed. Strategies for information dissemination will be critical in this regard.

C. Progressive legal recognition and protection of indigenous knowledge in Africa

37. Owing to the increased awareness by many African States of the commercial value of indigenous knowledge and its potential to create economic growth opportunities, many countries are playing an active role in the discussions on indigenous knowledge, as evident in the work of the Intergovernmental Committee at WIPO. The inclusion of the perspectives and voices of African indigenous peoples in the Governments' inputs to the WIPO process is of utmost importance. Effective partnerships are essential to finding solutions.

38. African regional governmental bodies, such as the African Union, have also addressed the need to protect indigenous knowledge and prevent its misuse by introducing regional legal frameworks and policies to protect traditional knowledge

and genetic resources. The Organization of African Unity, the predecessor of the African Union, adopted the African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources in 2000 to serve as a guide for African countries developing national laws on the rights of local communities to their traditional knowledge and genetic resources. Importantly, the African Model Legislation has never been used. It does, however, contain progressive provisions on the rights of indigenous and local communities. For example, it requires States members of the African Union to recognize the rights of indigenous and local communities over their biological resources, as well as traditional knowledge, innovations and practices. Access to traditional knowledge must be subject to prior informed consent from communities. The African Model Legislation also recognizes the collective rights of communities and their customary laws.

39. Within the framework of the African Regional Intellectual Property Organization, the Swakopmund Protocol on the Protection of Traditional Knowledge and Expressions of Folklore (hereafter "Swakopmund Protocol") was adopted in 2010.[20] The Swakopmund Protocol is open for signature to member countries of the African Regional Intellectual Property Organization, which can use the Protocol to develop laws at the national level. The Protocol has been used as a model for national policy and legislative initiatives in Botswana, Ghana, Kenya, Malawi, Mozambique, Namibia, Uganda and Zambia.[21] The Protocol grants exclusive rights to communities to authorize the exploitation of their traditional knowledge and to prevent exploitation without their prior informed consent. It emphasizes that protection must be tailored to the specific characteristics of traditional knowledge, including its collective and community context. While the Protocol is progressive in its recognition of the collective context of indigenous knowledge, it lags behind in terms of not recognizing the rights of indigenous peoples to their biological resources which, from the viewpoint of African indigenous communities, are closely linked to their indigenous knowledge.

40. Through the New Partnership for Africa's Development (NEPAD), African leaders have also recognized the importance of protecting and promoting indigenous knowledge systems and technologies. Paragraphs 140 and 141 of the NEPAD framework document are devoted to the protection and promotion of indigenous knowledge and related technological innovations. Paragraph 140 states:

> Culture is an integral part of development efforts of the continent. Consequently, it is essential to protect and effectively utilize indigenous knowledge ... and to share this knowledge for the benefit of humankind. [NEPAD] will give special attention to the protection and nurturing of indigenous knowledge ... inventions ... and all other tradition-based innovations and creations....

In order to operationalize paragraph 140, a programme on securing and using Africa's indigenous knowledge base has been established under the African Ministerial Council on Science and Technology, a high-level policy and political

[20] A similar initiative, developed by the Organisation africaine de la propriété intellectuelle, was adopted in 2007.

[21] WHO, African Health Observatory, "Intellectual property approaches to the protection of traditional knowledge in the African region", *African Health Monitor*, No. 13 (August 2010).

forum for ministers of science and technology from all States members of the African Union. The Council's remit is to enable African countries to collectively harness and apply science and technology to transform their economies and attain the Millennium Development Goals.

41. While progress has been made in advancing the legal protection of indigenous knowledge at the African regional level, widespread negative attitudes towards indigenous peoples more generally, and towards their knowledge systems more specifically, pervade and hamper the effective realization of these initiatives. Such negative attitudes relate to all things indigenous, such as traditional practices relating to health, education and agriculture. Such practices and knowledge systems tend to be regarded as unscientific and retrograde. In this regard, training for government representatives and ministerial staff on indigenous peoples and the value of their knowledge for sustainable development would be crucial.

42. The international and African regional legal instruments are not likely to sufficiently address the needs and aspirations of individual States. Well-coordinated national legal and policy initiatives have the potential to effectively address and secure indigenous peoples' right to maintain, control, protect and develop their knowledge and exercise their right to maintain intellectual property rights over their knowledge systems, as affirmed by the United Nations Declaration on the Rights of Indigenous Peoples.

43. To date, a limited number of policy and legal frameworks for indigenous knowledge have been adopted by African States. The legal vacuum created by the lack of national policy and legal frameworks for indigenous knowledge, and consequent disputes over the ownership, is filled by organizations and researchers who enter the countries in order to collect indigenous knowledge freely. Where international organizations provide support to African Governments' efforts to document indigenous knowledge, some agreements that provide access to document indigenous knowledge have been made without the free, prior and informed consent of indigenous communities. The full and effective participation of indigenous peoples should be ensured in any development of policies and laws on access to genetic material and protection of knowledge and intellectual property rights. Such policies and laws should apply a rights-based framework and be based on the United Nations Declaration on the Rights of Indigenous Peoples, in particular the principle of free, prior and informed consent.

44. Countries in Africa that offer some form of legal protection of indigenous knowledge include Cameroon, Ghana, Kenya, Malawi, Nigeria, South Africa, Uganda and the United Republic of Tanzania. To date, Kenya remains one of the few countries in Africa with a specific policy on traditional knowledge, genetic resources and traditional cultural expressions, even though the policy has yet to be formalized. Kenya also has a draft policy on traditional medicine and medicinal plants. The United Republic of Tanzania has a policy on traditional alternative medicine under its Ministry of Health. Malawi and Uganda have developed bills on traditional medicine, but they are yet to be enacted. South Africa adopted an indigenous knowledge systems policy and a Biodiversity Act in 2004, and also established a national office for indigenous knowledge systems in 2006. Cameroon has a framework for the protection of inventions and innovations related to traditional medicine, and Ghana has a national policy on intellectual property rights.

Nigeria developed national legislation and a bill on intellectual property rights in 2006/07.

45. While these are some positive examples of legal initiatives that, in part, cover indigenous knowledge, most of the legal frameworks appear to be fragmentary and need to be more comprehensive. There is also widespread lack of coordination between government initiatives and government agencies on protecting indigenous knowledge and, at times, a duplication of efforts that results in conflicting policies and regulatory agreements.

D. Good practices

46. A celebrated case highlighting good practices is that of the San people of South Africa and their efforts to tackle the unauthorized use of their knowledge concerning the hoodia cactus plant, used to ward off hunger. In 1995, the South African Council for Scientific and Industrial Research, drawing on anthropological research from the 1930s, patented the hoodia plant's appetite-suppressing properties. By 1998, revenues from the licensing fee for developing and marketing the element as a slimming drug had reached $32 million.[22] The San alleged biopiracy and threatened legal action, including for violations of their right to property and equality. Following pressure from advocates working with the San, the Council agreed to share royalties with the San through a benefit-sharing agreement adopted in 2003. This solution demonstrates that with goodwill on all sides, mutually acceptable arrangements for access and benefit-sharing can be reached. The importance of intellectual property in securing future benefits was recognized by all parties, including the San.[23] In December 2008, the company that had received a licence to advance the hoodia patent suspended its hoodia project. As a result, it is not clear if there will be any benefits for the San.

47. An indigenous-driven good practice is the Masai intellectual property initiative that attempts to reclaim Masai ownership of its famous iconic cultural brand. The initiative aims to obtain licences from companies that use Masai indigenous knowledge. Initiatives to enhance community capacity, including awareness-raising and training, have been crucial in this regard. Under its Creative Heritage Project, WIPO assisted with training the Masai to document their indigenous knowledge.[24] These training-type initiatives should be encouraged.

48. The increase in community-based mapping is symptomatic of indigenous groups' concern over the non-recognition or misuse of their knowledge. Indigenous peoples have started to document their knowledge through mapping. In Cameroon, indigenous communities have been trained by non-governmental organizations to map their use of the forests in which they live. With technical support they have produced digitized maps of their traditional hunting and gathering areas as well as areas of cultivation. The maps remain the intellectual property of indigenous

[22] United Nations Development Programme, *Human Development Report 2004: Cultural Liberty in Today's Diverse World*, chap. 5, "Globalization and cultural choice", referenced in *State of the World's Indigenous Peoples* (United Nations publication, Sales No. 09.VI.13).

[23] Commission on Intellectual Property Rights, Integrating Intellectual Property Rights and Development Policy.

[24] See "Digitizing traditional culture", *WIPO Magazine* (June 2008).

communities, and serve as a focal point for discussions on land tenure and access rights over areas from which indigenous communities have been excluded.[18] Community mapping is also emerging as an important process in Kenya, where both the Endorois and the Ogiek have started mapping their lands and related indigenous knowledge. The Ogiek community map indicates, for instance, honey production in particular areas of their homelands.

V. Conclusion and recommendations

A. Conclusion

49. The increase in misappropriation and unauthorized use of indigenous knowledge has determined that managing indigenous knowledge, once a local task regulated by customary law, has become an international issue for indigenous peoples. A significant challenge facing indigenous peoples on a global scale is the misappropriation and use of their indigenous knowledge for commercial and other purposes. Indigenous knowledge has considerable commercial value, and while corporations and others are benefiting from indigenous knowledge, the traditional holders of the knowledge are rarely compensated. In recent years, some progress has been made towards new, ground-breaking instruments to protect indigenous peoples' traditional knowledge and traditional cultural expressions. Further progress is required as a matter of securing indigenous peoples' basic human rights. Indigenous peoples in the African region have a wealth of traditional knowledge, but the legal framework for protecting it is yet to be sufficiently established. While some positive examples of legal initiatives exist, most of the legal framework to date appears to be fragmentary and will need to be more comprehensive. The full and effective participation of indigenous peoples and their communities in any initiatives that may affect their indigenous knowledge needs to be ensured. Hence, effective partnerships are essential to finding solutions.

B. Recommendations

To the World Intellectual Property Organization

50. WIPO should adopt modalities that facilitate the full and effective participation of indigenous peoples in the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore process, as well as in all other processes related to the work of the Intergovernmental Committee. WIPO should specifically focus on African indigenous representatives' participation as an affirmative action to increasing awareness of WIPO processes in the African region.

51. WIPO should work towards the adoption of a legally binding outcome document that reflects the core demands of indigenous peoples and their communities that is consistent with the United Nations Declaration on the Rights of Indigenous Peoples and with the full and equal participation of indigenous peoples.

52. WIPO is encouraged to develop, in consultation with the African Regional Intellectual Property Organization and indigenous peoples, culturally appropriate training classes for capacity-building for African indigenous communities. The

classes could focus on training in linkages between indigenous knowledge and economics, negotiation processes, elements of free, prior and informed consent processes, benefit-sharing models and dispute resolution. WIPO could also incorporate an accessible online course in traditional knowledge as part of its WIPO Academy offerings. Strategies for information dissemination will be critical in this regard.

To African States

53. African State delegations participating in the work of the WIPO Intergovernmental Committee should include the perspectives and voices of African indigenous peoples and their communities in this process.

54. African States should, in full consultation with indigenous peoples, adopt national measures to actively protect indigenous knowledge. Agreements should be reached on how sacred knowledge should be treated and how communities must be consulted, and indigenous peoples must play an active role in the protection, promotion and use of their knowledge. All legal and/or policy initiatives to protect and benefit the holders of indigenous knowledge need to recognize the holistic nature of this knowledge. These initiatives should be tailored to the specific needs and resource constraints of indigenous communities, and include capacity-building programmes, documentation initiatives and broader infrastructural developments, with the full and effective participation of the indigenous peoples.

55. African States should ensure that any development policies or programmes that target and affect indigenous communities recognize the important role that indigenous knowledge plays for the survival of communities, and that indigenous knowledge is fully integrated into policies and programmes.

56. African States should adopt measures to raise awareness among indigenous communities of the potential value of their knowledge, and develop strategies for promoting and securing opportunities for indigenous knowledge-based entrepreneurship in indigenous communities.

57. African States should inform indigenous peoples and their communities of any current and proposed research or bioprospecting activities to take place in their areas, and ensure that these activities are carried out in accordance with international standards on the rights of indigenous peoples.

58. African Governments are encouraged to provide training for government representatives and ministerial staff on indigenous peoples and the value of their knowledge for sustainable development.

To African indigenous peoples

59. In line with the good practice of the Masai intellectual property initiative, African indigenous peoples should increase their efforts to enhance community capacity, including awareness-raising and training on the potential value of their indigenous knowledge and measures available to protect their knowledge, and ensure that any use of their knowledge benefits their communities.